

### AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended). ~~A~~An isolated peptide which comprises:

(a) the sequence shown in SEQ ID NO:1; or

(b) ~~the amino acid sequences: His736GlyTrpSerTyrGlyGlyTyrLeu;~~

~~Leu816AspGluAsnValHisPheAlaHis; Glu847ArgHisSerHeArg and~~

~~Phe255ValLeuGlnGluGluPhe, and which has the substrate specificity of the sequence shown in SEQ ID NO:1; or~~

~~————— (c) — the~~a sequence which has at least ~~60%~~95% identity with the sequence shown in SEQ ID NO:1, and which has the same substrate specificity ~~of the sequence shown in~~as SEQ ID NO:1.

Claims 2-3 (cancelled).

Claim 4 (currently amended). A fragment of the sequence shown in SEQ ID NO:1 which has the same substrate specificity ~~of the sequence shown in~~as SEQ ID NO:1.

Claim 5 (original). A fragment according to claim 4 which consists of the sequence shown in SEQ ID NO.s: 3, 5 or 7.

Claim 6 (original). A peptide according to claim 1, wherein an asparagine residue in the peptide is not linked to a carbohydrate molecule.

Claim 7 (original). A peptide according to claim 1, wherein the peptide is not expressed on the cell surface membrane of a cell.

Claim 8 (currently amended). A fusion protein comprising the amino acid sequence shown in SEQ ID NO:1 linked with a further amino acid sequence, the fusion protein having the same substrate specificity ~~of the sequence shown in~~as SEQ ID NO:1.

Claim 9 (original). A fusion protein according to claim 8 wherein the further amino acid sequence is selected from the group consisting of GST, V5 epitope and His tag.

Claim 10 (withdrawn). A method of identifying a molecule capable of inhibiting cleavage of a substrate by DPP8 comprising the following steps:

- (a) contacting DPP8 with the molecule;
- (b) contacting DPP8 of step (a) with a substrate capable of being cleaved by DPP8, in conditions sufficient for cleavage of the substrate by DPP8; and
- (c) detecting substrate not cleaved by DPP8, to identify that the molecule is capable of inhibiting cleavage of the substrate by DPP8.

Claim 11 (withdrawn). A method of identifying a molecule capable of inhibiting specifically, the cleavage of a substrate by DPP8, the method comprising the following steps:

- (a) contacting DPP8 and a further protease with the molecule;
- (b) contacting DPP8 and the further protease of step (a) with a substrate capable of being cleaved by DPP8 and the further protease, in conditions sufficient for cleavage of the substrate by DPP8 and the further protease; and
- (c) detecting substrate not cleaved by DPP8, but cleaved by the further protease, to identify that the molecule is capable of inhibiting specifically, the cleavage of the substrate by DPP8.

Claim 12 (withdrawn). A method of reducing or inhibiting the catalytic activity of DPP8, the method comprising the step of contacting DPP8 with an inhibitor of DPP8 catalytic activity.

Claim 13 (withdrawn). A method of cleaving a substrate comprising the step of contacting the substrate with DPP8 in conditions sufficient for cleavage of the substrate by DPP8.

Claim 14 (withdrawn). A method of detecting an activated T cell, the method comprising the step of measuring the level of DPP8 gene expression in a T cell.

Claim 15 (withdrawn). A method according to claim 14, wherein the level of DPP8 gene expression is detected by detecting the amount of DPP8 RNA in the cell.

Claim 16 (withdrawn).                      A nucleic acid molecule which:

(a) encodes the sequence shown in SEQ ID NO:1; or

(b) consists of the sequence shown in SEQ ID NO:2; or

(c) is capable of hybridizing to a nucleic acid molecule consisting of the sequence shown in SEQ ID NO:2 in stringent conditions, and which encodes a peptide which has the substrate specificity of the sequence shown in SEQ ID NO:1.

Claim 17 (withdrawn).                      A nucleic acid molecule according to claim 16

©) wherein the molecule is capable of hybridising in high stringent conditions.

Claim 18 (withdrawn).                      A nucleic acid molecule according to claim 16

which is capable of hybridising to a gene which is located at band q 22 on human chromosome 15.

Claim 19 (withdrawn).                      A nucleic acid molecule according to claim 16

which does not contain 5' or 3' untranslated regions.

Claim 20 (withdrawn).                      A fragment of a nucleic acid molecule

consisting of the sequence shown in SEQ ID NO:2, which encodes a peptide which has the substrate specificity of the sequence shown in SEQ ID NO:1.

Claim 21 (withdrawn).                      A fragment according to claim 20 which

consists of the sequence shown in any one of SEQ ID NO.s: 4, 6 or 8.

Claim 22 (withdrawn).                      A vector comprising a nucleic acid molecule

according to claim 16.

Claim 23 (withdrawn).                      A cell comprising a vector according to claim

22.

Claim 24 (original).    A composition comprising a peptide according to claim

1.

Claim 25 (withdrawn).                      An antibody which is capable of binding to a

peptide according to claim 1.

Application No. 10/070,464 - - - - 10

Claim 26 (withdrawn).  
produced by a hybridoma cell.

An antibody according to claim 25 which is

Claim 27 (withdrawn).  
antibody according to claim 26.

A hybridoma cell capable of making an